

Proposed Project

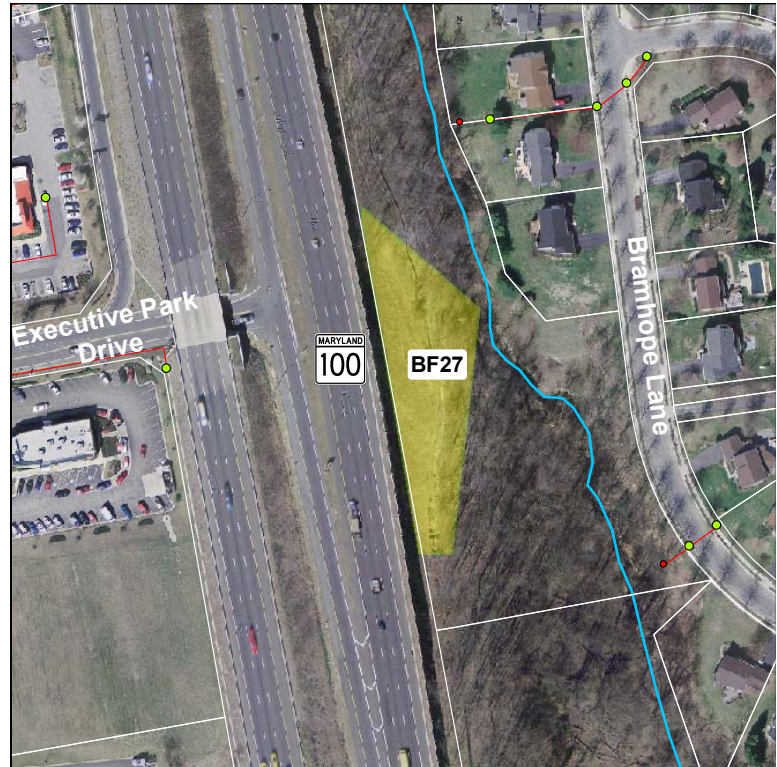
Upper Little Patuxent Watershed

Project Number: BF27
Subwatershed: Red Hill Branch

Project Type: Reforestation / Buffer
Restoration

Project Size: 0.66 acres

Project Location: Behind homes along
Bramhope Lane and adjacent to Route 100.



Project Description: The area between the soundwall and the tributary to Red Hill Branch as shown in the map and photo above was identified by field crews as lacking sufficient buffer. This project would entail supplemental planting of shade-tolerant native species in the area between the soundwall and the stream. There are mature trees in the area, but the understory is diminished, likely due to deer browsing. A homeowner adjacent to the area is believed to be leaving corn and peanuts to attract wildlife so education would be a necessary part of this project. The County is in the process of designing a stream restoration project adjacent to this potential project that is anticipated to be constructed in the fall of 2010.

Project Benefits:

Stabilization	Additional trees and shrubs will help stabilize the stream bank and the slope of the soundwall.
Habitat	The project will provide additional terrestrial forest habitat.
Water Quality	A more established buffer will provide shading effects to reduce water temperature and will trap runoff and pollutants such as fertilizers from the adjacent property.

Project Constraints:

Environmental	No environmental/permitting constraints are present.
Property Ownership	This project is on County owned property (Brampton Hills natural resources open space).
Facility Access	Access to this site is obtained from Bramhope Lane.
Design / Construction	No major design or construction constraints are present. The design should incorporate native vegetation and a marked no-mow zone for understory development. The planting effort should be coordinated with the pending adjacent stream restoration project.

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Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL (Volunteer Labor)	TOTAL (Without Volunteer Labor)
Riparian Buffer Replacement					
Plant Material (trees)	0.66	AC	\$3,750.00	\$2,475	\$2,475
Plant Material (shrubs)	0.66	AC	\$2,725.00	\$1,799	\$1,799
Mulch, Tree Shelter	449	PLANTS	\$6.00	\$2,695	\$2,695
Cost to Plant	449	PLANTS	\$6.00	\$0	\$2,695
Site Preparation (volunteer)		AC	\$0.00	\$0	\$0
Basic Site Maintenance and Monitoring (volunteer)		AC	\$0.00	\$0	\$0
Direct Construction Subtotal				\$6,969	\$9,664
Base Construction Cost				\$6,969	\$9,664
Mobilization (10% of Directs or \$1,000)				\$0	\$0
Subtotal				\$6,969	\$9,664
Contingency (30%)				\$2,091	\$2,899
Construction Subtotal				\$9,059	\$12,563
Env't'l Studies / Permitting (5% of Construction or \$1,000)				\$0	\$0
Landscape Design and Surveys (25% of Construction or \$5,000)				\$0	\$0
Total Capital Cost				\$9,059	\$12,563
Operations and Maintenance Costs					
Annual Maintenance	5	Percent		\$348	\$483
Discount Rate	5	Percent			
Expected Life	5	Years			
Net Present Value of Annual Costs				\$1,509	\$2,092
Life Cycle Cost				\$10,600	\$14,700

Cost Notes and Assumptions:

Project costs were derived for both volunteer and paid labor. In calculating costs for volunteer labor it is assumed that local volunteer organizations could accomplish the project with County assistance and oversight. Site preparation, planting and any necessary maintenance and monitoring would be conducted by volunteers.

Planting density is planned at 1 tree or shrub planted at 8 foot intervals for a total of 681 plants per acre.

Size and species of trees and shrub plant material is based on approved Howard County Recreation and Parks information and is typically a 3-4 foot plant. Use of more mature or more immature plant material would affect the planting density and cost per plant.

Cost of plant material is based on 2009 survey of local and regional wholesale native plant nurseries. Plant material (seedlings) may also be obtained from the Maryland Department of Natural Resources, State Forest Tree Nursery at a much reduced cost or through Howard County's Stream ReLeaf program at no cost.